PROJECT INFORMATION	
Project Title	Ground Hog Meadow Watershed Restoration Project
Brief Description	The project would complete headcut restoration in Groundhog Meadow, on a tributary to the North Fork Kern River. The meadow currently has adverse impacts due to stream downcutting and lowering of the meadow's water table. Crews would construct 3-4 new large grade control structures in the upper portion of the meadow and 10 smaller structures in the lower reaches. In addition, they would revegetate bare banks and complete minor repairs to existing structures. The ultimate goal of the project is to restore the degraded ecosystem function of Groundhog Meadow a roughly 50 acre meadow within the Golden Trout Wilderness. The meadow is only accessible by horse or foot, and is about 11 miles from the nearest road. The meadow is surrounded by mixed conifer forest. It contains a main, unnamed stream channel with multiple perennial and intermittent tributaries. Groundhog Meadow contains streams with adverse impacts due to past stream alteration (diversions, irrigation, grading), grazing, recreational uses, and possible other causes. This has resulted in stream headcutting, incision and widening that remains to this day, although there is an upward trend in most of the meadow. Although there is an upward trend, recovery is at a point where it needs some active restoration to continue the upward trend. The stream alteration has affected the hydrologic function of the surrounding meadow by lowering the water table. This has affected golden trout and other aquatic and riparian habitat by reducing channel complexity, reducing bank cover and altering vegetative composition, and increasing fine sedimentation. PAGE 2 OF 3 Volunteers and partners for this project include California Trout and the Southern Sierra Integrated Regional Water Management Group (IRWMG). These groups will provide volunteer help, technical assistance, and in-kind contributions. Meadow restoration work has been ongoing sporadically since the 1950's

	within the Kern Plateau and in Groundhog Meadow itself. In the past 3 years, meadow restoration projects on the Kern Plateau have been a focus of the Inyo National Forest. This project is part of an ongoing effort by the Inyo National Forest to improve meadow conditions across the Kern Plateau area, mainly within the Golden Trout Wilderness. Efforts include not only restoration efforts, but grazing and recreation management designed to improve stream and meadow condition within this area.
Total Requested Amount	71,500.00
Other Fund Proposed	22,000.00
Total Project Cost	93,500.00
Project Category	Site Improvement/Restoration
Project Area/Size	0
Project Area Type	Acres
Have you submitted to SNC this fiscal year?	No
Is this application related to other SNC funding?	No

Project Results
Restoration

Project Purpose	**Project Purpose Percent**
Water Quality	

County
Tulare

Sub Region

South

PROJECT CONTACT INFORMATION

Name	Mr. Todd Ellsworth,
Title	Forest Hydrologist
Organization	USDA Forest Service, Inyo National Forest, Bishop
Primary Address	351 Pacu Lane Suite 200, , , Bishop, CA, 93514
Primary Phone/Fax	760-873-2547 **Ext.**
Primary Email	tellsworth@fs.fed.us

PROJECT LOCATION INFORMATION

Project Location	
Address:	Golden Trout Wilderness, Inyo National Forest, , , Bishop, CA, 93514 United States
Water Agency:	Kern River Valley Water District
Latitude:	36.365526
Longitude:	-118.30902
Congressional District:	n/a
Senate:	n/a
Assembly:	n/a
Within City Limits:	No
City Name:	

ADDITIONAL INFORMATION

Grant Application Type

Grant Application Type: **Category One Site Improvement**
Grant Application Type: **Category One Site Improvement**

PROJECT OTHER CONTACTS INFORMATION

Other Grant Project Contacts

Name:	Mr. Todd Ellsworth,
Project Role:	Day-to-Day Responsibility
Phone:	7603763781
Phone Ext:	
E-mail:	tellsworth@fs.fed.us

UPLOADS

The following pages contain the following uploads provided by the applicant:

Upload Name
Completed Application Checklist
Table of Contents
Full Application Form
Authorization to Apply or Resolution
Narrative Descriptions
Detailed Budget Form
CEQA Documentation
NEPA Documentation
Long Term Management Plan
Project Location Map
Project Location Map
Topographic Map
Photos of the Project Site
Site Plan - Only Site Improv. or Restoration Proj.

Parcel Map Showing County Assessors Parcel Number

To preserve the integrity of the uploaded document, headers, footers and page numbers have not been added by the system.

Appendix B1
Full Application Checklist

Project Name: Groundhog Meadow Watershed Restoration Project

Applicant: Inyo National Forest

Please mark each box: check if item is included in the application; mark "N/A" if not applicable to the project. "N/A" identifications must be explained in the application. Please consult with SNC staff prior to submission if you have any questions about the applicability to your project of any items on the checklist. All applications must include a CD including an electronic file of each checklist item, if applicable. The naming convention for each electronic file is listed after each item on the checklist. (Electronic File Name = EFN: "naming convention". file extension choices)

Submission requirements for all Category One and Category Two Grant Applications

1. [X] Completed Application Checklist *(EFN: Checklist.doc,.docx,.rtf, or .pdf)*

2. [X] Table of Contents *(EFN: TOC.doc,.docx,.rtf, or .pdf)*

3. [X] Full Application Project Information Form *(EFN: SIform.doc, .docx, .rtf, or .pdf)*

4. [X] Authorization to Apply or Resolution *(EFN: authorization.doc, .docx, .rtf, or .pdf)*

5. [X] Narrative Descriptions - Submit a single document that includes each of the following narrative descriptions *(EFN: Narrative.doc, .docx, .rtf)*
   a. [X] Detailed Project Description (5,000 character maximum)
      - [X] Project Description including Goals/Results, Scope of Work, Location, Purpose, etc.
      - [X] Project Summary
      - [X] Environmental Setting
   b. [X] Workplan and Schedule (1,000 character maximum)
   c. [X] Restrictions, Technical/Environmental Documents and Agreements(1,000 character maximum)
   d. [X] Organizational Capacity(1,000 character maximum)
   e. [X] Cooperation and Community Support (1,000 character maximum)
   f. [X] Long Term Management and Sustainability (1,000 character maximum)
   g. [X] Performance Measures (1,000 character maximum)

6. Supplemental and Supporting documents - Index
   a. [X] Detailed Budget Form (EFN: Budget.xls, .xlsx)
   b. Restrictions, Technical/Environmental Documents and Agreements, as applicable
      - [N/A] Restrictions / Agreements *(EFN: RestAgree.pdf)*
      - [N/A] Regulatory Requirements / Permits *(EFN: RegPermit.pdf)*

- [X] California Environmental Quality Act (CEQA) documentation *(EFN: CEQA.pdf)*
- [X] National Environmental Policy Act (NEPA) documentation *(EFN: NEPA.pdf)*

c. Cooperation and Community Support
- [NA] Letters of Support *(EFN: LOS.pdf)*

d. Long-Term Management and Sustainability
- [X] Long-Term Management Plan *(EFN: LTMP.pdf)*

e. Maps and Photos
- [X] Project Location Map *(EFN: LocMap.pdf)*
- [NA] Parcel Map showing County Assessor's Parcel Number(s) *(EFN: ParcelMap.pdf)*
- [X] Topographic Map *(EFN: Topo.pdf)*
- [X] Photos of the Project Site *(10 maximum) (EFN: Photo.jpg, .gif)*

f. Additional submission requirements <u>for Conservation Easement Acquisition applications only</u>
- [NA] Acquisition Schedule *(EFN: acqSched.doc,.docx,.rtf,.pdf)*
- [NA] Willing Seller Letter *(EFN: WillSell.pdf)*
- [NA] Real Estate Appraisal *(EFN: Appraisal.pdf)*
- [NA] Conservation Easement Language *(EFN: CE.pdf)*

g. Additional submission requirements <u>for Site Improvement / Restoration Project applications only</u>
- [NA] Land Tenure Documents – attach only if documentation was not included with Pre-application *(EFN: Tenure.pdf)*
- [X] Site Plan *(EFN: SitePlan.pdf)*
- [NA] Leases or Agreements *(EFN: LeaseAgmnt.pdf)*

I certify that the information contained in the Application, including required attachments, is accurate.

Eric Luttrell (for Todd Ellsworth) — 1/19/12

Signed *(Authorized Representative)* — Date

Todd Ellsworth, Watershed Program Manager

Name and Title *(print or type)*

TABLE OF CONTENTS

Groundhog Meadow Watershed Restoration Project – Inyo National Forest

SIERRA NEVADA CONSERVANCY
PROPOSITION 84 - PROJECT INFORMATION FORM

Rev. August 2011

PROJECT NAME : Groundhog Meadow Watershed Restoration Project

APPLICANT NAME *(Legal name, address, and zip code)*
Inyo National Forest
351 Pacu Ln, Suite 200
Bishop, CA 93514

PERSON WITH FISCAL MANAGEMENT RESPONSIBILITY FOR GRANT CONTRACT/INVOICING

Name and title – type or print	*Phone*	*Email Address*
☐Mr. Todd Ellsworth	(760) 873-2457	tellsworth@fs.fed.us
☐Ms.		

COUNTY ADMINISTRATOR OR PLANNING DIRECTOR CONTACT INFORMATION *(At least one entry Is required)*

Name: Jean M. Rousseau – Tulare County Admin. Officer *Phone Number:(559)636-5005*

Email address: phogue@co.tulare.ca.us

Name: *Phone Number:*

Email address:

NEAREST PUBLIC WATER AGENCY (OR AGENCIES) CONTACT INFORMATION *(At least one entry Is required)*

Name: Kern River Valley Water District *Phone Number: (760)379-5336*

Email address: infoKRV@calwater.com

Name: *Phone Number:*

Email address:

Please identify the appropriate project category below and provide the associated details *(Choose One)*

X☐ Category One Site Improvement ☐ Category Two Pre-Project Activities
☐ Category One Conservation Easement Acquisition

☐ **Site Improvement/Conservation Easement Acquisition**	**Select one primary Site Improvement/Conservation Easement Acquisition deliverable**
Project area: _____	**X**☐ Restoration
Total Acres: _____	☐ Enhancement

SNC Portion (if different): _____ Total Miles (i.e. river or stream bank):_____ SNC Portion (if different): _____ **For Conservation Easement Acquisitions Only** ☐Appraisal Included ☐Will submit appraisal by_____	☐ Resource Protection ☐ Infrastructure Development / Improvement ☐ Conservation Easement
☐ **Pre-Project Activities**	**Select <u>one</u> primary Pre-Project deliverable** ☐ Permit ☐ CEQA/NEPA Compliance ☐ Appraisal ☐ Plan ☐ Condition Assessment ☐ Biological Survey ☐ Environmental Site Assessment

USDA United States Department of Agriculture | Forest Service | Inyo National Forest

Mt. Whitney Ranger District
P.O. Box 8
Lone Pine, CA 93545
(760) 876-6200
(760) 873-6201 TDD

File Code: 1580/2520
Date: January 18, 2012

Sierra Nevada Conservancy
11521 Blocker Drive. Ste. 205
Auburn, CA 95603

To the Sierra Nevada Conservancy,

This letter states approval for the Inyo National Forest to apply for a grant from the Sierra Nevada Conservancy Proposition 84 Healthy Forests Grant Program - Grant Category 1. The grant application title is *Groundhog Meadow Watershed Restoration Project.* Todd Ellsworth is approved to act as the project manager for this project and is eligible to represent the agency.

The Inyo National Forest is authorized to receive grant funds from the State of California. We intend to conduct the project pursuant to all grant conditions.

Thank you for consideration of the Inyo National Forest grant application for the *Groundhog Meadow Watershed Restoration Project.* If you have any questions about approval for grant submittal, please contact me at (760) 876-6227.

For questions about the project or the application, please contact Todd Ellsworth at (760)873-2457.

Sincerely,

Margaret M. Wood

MARGARET WOOD
District Ranger

Groundhog Meadow Watershed Restoration Project

5. Narrative Descriptions

a. Detailed Project Descriptions

Project Summary

The project would complete headcut restoration in Groundhog Meadow, on a tributary to the North Fork Kern River. The meadow currently has adverse impacts due to stream downcutting and lowering of the meadow's water table. We would construct 3-4 new large grade control structures in the upper portion of the meadow and 10 smaller structures in the lower reaches. In addition, we would revegetate bare banks and complete minor repairs to existing structures. The ultimate goal of the project is to restore the degraded ecosystem function of Groundhog Meadow.

Environmental Setting

Groundhog Meadow is a roughly 50 acre meadow within the Golden Trout Wilderness. The meadow is only accessible by horse or foot, and is about 11 miles from the nearest road. The meadow is surrounded by mixed conifer forest. It contains a main, unnamed stream channel with multiple perennial and intermittent tributaries. The streams within the meadow are currently incised, and the vegetation of the meadow has been altered by a lowered water table.

Project Description

Groundhog Meadow contains streams with adverse impacts due to past stream alteration (diversions, irrigation, grading), grazing, recreational uses, and possible other causes. This has resulted in stream headcutting, incision and widening that remains to this day, although there is an upward trend in most of the meadow. Although there is an upward trend, recovery is at a point where it needs some active restoration to continue the upward trend. The stream alteration has affected the hydrologic function of the surrounding meadow by lowering the water table. This has affected golden trout and other aquatic and riparian habitat by reducing channel complexity, reducing bank cover and altering vegetative composition, and increasing fine sedimentation.

The ecosystem function of Groundhog Meadow has been altered and this project would continue the process of restoring its ecosystem function closer to its potential.

Since the 1950's, headcut control structures have been installed in Groundhog Meadow to help prevent further stream downcutting and to aggrade the stream channel. In 2010 and 2011, a project was completed in Groundhog Meadow, arresting headcuts and stabilizing the channel throughout the meadow. In most cases, these have been successful, but they need to be augmented to continue to upward trend of the meadow. In some cases, existing structure are in need of minor repair to continue their usefulness. Additional structures, constructed using more modern methods, are needed to continue aggrading stream channels and create a more sinuous, lower grade channel. The final outcome of this project would be to construct 3-4 new large grade control structures in the incised stream in the

upper portion of the meadow and 10 smaller structures in the incised lower reaches. In addition, we would revegetate bare banks and complete minor repairs to existing structures. In addition, we would revegetate bare banks and complete minor repairs to existing structures. While there are no longer many active headcuts in the meadow, portions of the stream remain incised with raw, collapsing banks that are not capable of withstanding high flows.

Without stabilizing structures, the headcuts at the project site would progress upstream, which would incise a longer section of stream channel. This would decrease the amount of suitable golden trout habitat, increase sedimentation into the stream, and possible further lower the meadow's water table and reduce the meadow's ability to store water. The project would attempt to decrease flashy flows in the system and increase surface flow during the late summer season downstream of the project area. This would allow for higher, cooler flows during the late summer when golden trout and other aquatic species mortality can occur.

Volunteers and partners for this project include California Trout and the Southern Sierra Integrated Regional Water Management Group (IRWMG). These groups will provide volunteer help, technical assistance, and in-kind contributions.

Methods

Various methods would be used to treat headcuts and other unstable banks. Treatments can include one of the following, or a combination:

1. Placing a series of logs horizontally in an incised channel. Sediment fills in behind the logs, creating a step-pool system of small steps, and allows for slower water and a more sinuous, lower gradient channel (Photo 7).
2. Placing branches, root wads, baffles made of logs, or other anchored structures within the channel, abutting the bank. These structures would collect sediment and begin to build up point bars that help to narrow an incised channel, create meanders, and return it to a more natural shape, with a small low-flow channel and a wider, flatter flood plain.
3. Planting sod plugs in areas lacking bank stabilizing vegetation. These sod plugs are usually collected when sod is removed to build a structure, or sometimes at undisturbed productive sites throughout the meadow. The sod is then placed in a hole at the new site. As long as they are near enough water that their roots remain moist during most of the year, these sod plugs usually successfully grow and provide bank stabilization in the spring following implementation (Photo 8).

Meadow restoration work has been ongoing sporadically since the 1950's within the Kern Plateau and in Groundhog Meadow itself. In the past 3 years, meadow restoration projects on the Kern Plateau have been a focus of the Inyo National Forest. This project is part of an ongoing effort by the Inyo National Forest to improve meadow conditions across the Kern Plateau area, mainly within the Golden Trout

Wilderness. Efforts include not only restoration efforts, but grazing and recreation management designed to improve stream and meadow condition within this area.

b. Workplan and Schedule

Final design and planning work on this project could begin in late summer 2012, upon final grant authorization. Actual on-the-ground construction could begin in summer 2013. The project needs a 401/404 permit, and the work would be completed using non-SNC funds. This permit application would be submitted in fall, 2012. Final project design would be completed in winter 2012/2013. The Forest would begin recruiting work crews in early 2013, and would begin the hiring process in March 2013. While crews would not begin work until June, they would be hired to ensure their availability by March or April.

On-the-ground construction would begin in July, 2013, depending on weather. If it is a very wet year, work may need to begin in August. About half the construction would be complete in 2013, and the rest would be completed in 2014. Reports would be submitted every 6 months, beginning 6 months after finalization of the contract, likely in January or February, 2013. The following table shows a proposed timeline.

Project Deliverables	**Timeline**
401/404 permit application submittal	
Final Project Design	
Submit 1st 6 month report	February 28, 2013
Recruit work crews / hire crews	
Begin 1st work season	
Submit 2nd 6 month report	August 31, 2013
Finish 1st work season	
Submit 3rd 6 month report	February 28, 2014
Begin 2nd work season	
Submit 4th 6 month report	August 31, 2014
Finish work season and project implementation, including monitoring previous season's work	September 30, 2014
Submit 5th 6 month report	February 28, 2015
Complete monitoring of project, submit 6th 6 month report	August 31, 2015
Submit final report to SNC	February 28, 2016

c. Restrictions, Technical/Environmental Documents and Agreements

Restrictions/Agreements: The work is all on land managed by the Inyo National Forest (INF), which is Federal land. No property restrictions or encumbrances.

Regulatory Requirements/Permits:

1. California Department of Fish and Game: A 1600 permit is not needed for this project because it is a Federal project on Federal land.
2. U.S. Fish and Wildlife Service: No special-status species were found in surveys. No consultation is required.
3. 401/404 Wetland dredge and fill permit from the Army Corps of Engineers and the California Regional Water Quality Control Board.
    - We would apply for the permit upon grant approval.
4. State Historic Preservation Office: The site has been surveyed for heritage resources. It was determined that there would be no adverse effect to archaeological sites or historic properties. No consultation required.
5. Other State and Local agencies: This project would occur entirely within Federally managed lands and .o other permits or regulatory requirements are necessary.

The project has already complied with the Federal (NEPA) and State (CEQA) analysis process. The NEPA document is attached in Section 6.b.

d. Organizational Capacity

The Inyo National Forest has completed numerous meadow restoration projects over the past 10 years. These have included the same methods that would be used for this Groundhog Meadow restoration project. In 2010 and 2011, meadow restoration work was successfully completed in Groundhog Meadow itself, funded mainly by the Upper Kern Basin Fishery Resource Enhancement Trust.

From 2010 through 2011, the Inyo National Forest successfully completed meadow restoration work, using the same methods that would be used in this Groundhog Meadow project, in meadows in the Kern Plateau area. That work was predominantly funded by the Sierra Nevada Conservancy (SNC), under the title, “Kern Plateau Stream and Meadow Restoration Project”. Reports submitted to SNC have been accepted by SNC. Bobby Kamansky, our SNC project contact, visited one of the project sites in 2010, and was pleased with the results.

The same Forest staff that were involved with the planning and implementation of the previous meadow restoration projects would plan and implement this project. This shows that the Inyo National Forest has the organizational capacity to complete the proposed project.

e. Cooperation and Community Support

In 2004, the Forest, California Department of Fish and Game, and the U.S. Fish and Wildlife Service developed the "Conservation Assessment and Strategy for the California Golden Trout". This agency partnership spurred the creation of what has become a successful public-private partnership; the Golden Trout Project. Participants have included California Trout, Trout Unlimited, Federation of Flyfishers, various retailers and other groups. These groups have worked together with the goal of restoring the habitat and distribution of the California Golden Trout. This project would be a part of the Golden Trout Project, and compliment previous efforts.

This area is within the focus area of the Southern Sierra Integrated Regional Water Management Group (IRWMG). That group has shown preliminary support for meadow restoration projects within its focus area and may provide technical assistance to the project.

We have no letters of support to submit with this application.

f. Long Term Management and Sustainability

The Long term management for the structures will continue to be a Forest responsibility. Forest service watershed specialists would visit the project areas every 4-5 years to ensure that the structures remain functional. If not, they would be repaired. The long-term management plan for the management of streams on the Kern Plateau has already been created, and is contained in the 2004 "Conservation Assessment and Strategy for the California Golden Trout", developed by the USFWS, USFS and CDF.

While help may be received from volunteers or grazing permittees, the Forest is capable of future management. The Forest has monitored similar headcut stabilization structures for decades, and similar projects that involve repairing and maintaining stream stabilization structures have occurred since the 1970's.

The project is designed to help the meadow become self-sustainable over time, with continued monitoring, maintenance, and possible new projects.

g. Performance Measures

Project Specific Performance Measure

Linear feet of Stream bank restored and protected

- About 150 feet of stream bank restored
- An additional estimated 1,500 feet protected
- Measuring this will not add any time or cost to the project.

Quantitative Measures

Number and type of jobs created

- 5-6 seasonal skilled laborer jobs for one full summer season.
- Measuring will not take any staff time or money.

Number and Diversity of people reached

- This project does not focus on public education, but it is a part of the Golden Trout Project, which publishes annual achievements on its website and in printed publications. It may also be featured on the California Trout website.

Number and value of preserved economic activities

- Groundhog Meadow is part of the Templeton grazing allotment. The INF is currently considering whether to allow grazing on the allotment. Cattle ranching is an important economic and cultural element in the Owens Valley. If grazing is allowed, Groundhog Meadow will return to a working landscape. Grazing on the Kern Plateau supports local (Inyo County) cattle ranchers. Allowing grazing depends on meadow condition. Cattle sales were about $11.4 million in 2010 in Inyo County. Grazing in Groundhog Meadow would be one small contribution.

Resources leveraged for the Sierra Nevada

- $20,000 to $25,000 would be leveraged with the requested SNC funds.

SIERRA NEVADA CONSERVANCY
PROPOSITION 84 - DETAILED BUDGET FORM

Project Name: **Groundhog Meadow Watershed Restoration**

Applicant: **Inyo National Forest**

SECTION ONE **DIRECT COSTS**	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Total**
Project Management Costs	$3,000.00	$3,000.00	$3,000.00			$9,000.00
Site Restoration Work Costs	$20,000.00	$20,000.00				$40,000.00
Travel/Per diems/ pack stock costs	$5,000.00	$5,000.00	$1,000.00			$11,000.00
						$0.00
						$0.00
						$0.00
						$0.00
DIRECT COSTS SUBTOTAL:	$28,000.00	$28,000.00	$4,000.00	$0.00	$0.00	$60,000.00

SECTION TWO **INDIRECT COSTS**	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Total**
Monitoring	$0.00	$1,000.00	$4,000.00			$5,000.00
Project materials & supplies purchased	$500.00	$500.00	$0.00			$1,000.00
Publications, Printing, Public Relations	$0.00	$500.00	$500.00			$1,000.00
						$0.00
INDIRECT COSTS SUBTOTAL:	$500.00	$1,500.00	$4,000.00	$0.00	$0.00	$7,000.00
PROJECT TOTAL:	$28,500.00	$29,500.00	$8,000.00	$0.00	$0.00	$67,000.00

SECTION THREE **Administrative Costs (Costs may n*ot to exceed 15% of total Project Cost*) :**						**Total**
**Organization operating/overhead costs*	$1,500.00	$1,500.00	$1,500.00			$4,500.00
						$0.00
						$0.00
						$0.00
						$0.00
ADMINISTRATIVE TOTAL:	$1,500.00	$1,500.00	$1,500.00	$0.00	$0.00	$4,500.00
SNC TOTAL GRANT REQUEST:	$30,000.00	$31,000.00	$9,500.00	$0.00	$0.00	$71,500.00

SECTION FOUR **OTHER PROJECT CONTRIBUTIONS**	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Total**
List other funding or in-kind contibutors to project (i.e. Sierra Business Council, Department of Water Resources, etc.)						
Forest Service funding	$7,000.00	$3,000.00				$10,000.00
Other grant funds	$4,000.00	$4,000.00				$8,000.00
In- kind contributions (volunteers	$2,000.00	$2,000.00				$4,000.00
						$0.00
						$0.00
						$0.00
Total Other Contributions:	$13,000.00	$9,000.00	$0.00	$0.00	$0.00	$22,000.00

Environmental Review Data Sheet
CEQA checklist

Applicant: Inyo National Forest	**Project Name: Groundhog Meadow Watershed Restoration Project**

Item 1: Has a CEQA Notice of Determination (NOD) been filed for this Project? ☐ Yes ☒ No

- If yes, stop here. There is no need to fill out the questions listed below.
- If no NOD has been filed, proceed to Item 2.

Item 2: Are the proposed activities "a Project" under Section 15378 of CEQA? ☒ Yes ☐ No

- If yes, continue to Item 3. If unsure, mark "Yes" and continue to Item 3.
- If no, check one of the appropriate boxes below. If "Other" is checked, provide an explanation of the reason the proposed activities are not considered "a Project" under Section 15378 of CEQA. If the proposed activities are not a Project, do not answer Items 3-8.

☐ The Application is requesting funds solely for personnel and support to enforce OHV laws and ensure public safety. These activities would not cause any physical impacts on the environment and are thus not a 'Project' under CEQA.

☐ Other. Explain why proposed activities would not cause any physical impacts on the environment and are thus not a 'Project' under CEQA:

NOTE: If the proposed activities are considered "a Project" under 15378 of CEQA, the Applicant must provide an explanation for answers to Items 3-8. Simple "yes" or "no" responses without explanation shall not be accepted. If an explanation can be found in NEPA or other documentation, then summarize and list the page number from which the Applicant is summarizing. For items 3-8, the Applicant may also list Best Management Practices (BMPs), Standard Operating Practices or Procedures (SOPs), and Limited Operating Periods (LOPs) that will avoid adverse effects from the Applicant's activities.

Item 3: *Evaluate the impact of this Project on wetlands, navigable waters, and sensitive habitats and species (including threatened and endangered species).*

The entire project would occur in floodplains and portions of the project would occur in wetlands. However, the project will have long-term beneficial effects to the floodplain and wetland function. There could be some minor, short term adverse effects because construction of small structures may allow for short-term, minor increased sediment input as the structure is built.

In the long-term, the project will improve floodplain and wetland function. The purpose of the project is to prevent stream downcutting in meadows. This will help prevent further water table lowering in meadows, and eventually help allow for higher water tables that are beneficial for wetland function, wetland vegetation, water storage and flood attenuation. Therefore, the project will have only beneficial long-term effects to wetlands.

There is no potential habitat for any threatened, endangered, or proposed plant or animal species within the project area, nor have any populations of federally listed or proposed species been reported from the area.

One Forest Service sensitive species—the Golden Trout—is known to occur in the project area. This project may affect individuals of this species, but is not likely to result in a trend toward Federal listing. The project intends to improve habitat for Golden Trout and other aquatic species as it should help restore stream morphology, reduce erosion, and increase riparian vegetative cover.

Item 4: *Evaluate cumulative impacts from this Project along with others of the same type in the same general place, such as increased noise or traffic. Refer to the cumulative impacts discussion in the environmental impact statement, land management plan, or other sources as appropriate.*

There should be no adverse cumulative effects from this project, but there should be positive cumulative effects. The area has experienced negative cumulative effects from the past 150 years of livestock grazing and recreational use. Restoration activities and changes in management over the past 50 years have allowed for watershed and aquatic habitat improvements across the Kern Plateau. This project would help improve those conditions, and be a part of the beneficial cumulative effects on the Kern Plateau.

Item 5: *Discuss the possibility that the proposed activities will have a significant effect on the environment due to steep slopes or highly erosive soils.*

The project is a restoration project whose main purpose is to reduce stream bank erosion and downcutting. The project areas are all less than 5% gradient, and the soils are only highly erodable within gullies. The gullies will be stabilized under this project, and therefore there should be reduced environmental effects to soil erosion.

Item 6: *Discuss the potential for damage to scenic resources within the view shed of a highway officially designated as a state scenic highway.*

This project is not located near any designated state scenic highway. It cannot be seen from any highways.

Item 7: Is the proposed Project area located on a site included on any list compiled pursuant to Section 65962.5 of the California Government Code (hazardous materials)? ☐ Yes ☒ No
Refer to the Cortese List data resources at the following website to identify documented toxic hazards at the Project site:
http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm

- If yes, describe the location of the hazard relative to Project site, the level of hazard and the measures to be taken to minimize or avoid the hazards.

Item 8: Would the proposed Project have potential for any substantial adverse impacts to historical or cultural resources? ☐ Yes ☒ No
If yes, describe the potential impacts and for any substantially adverse changes in the significance of historical or cultural resources and measures to be taken to minimize or avoid the impacts.

Protection of heritage resources is incorporated into the proposed action, and will follow the stipulations in the October, 1996, Programmatic Agreement (PA) among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Regarding the Identification, Evaluation, and Treatment of Historic Properties Managed by the National Forests of the Sierra Nevada, California

Ground disturbing activities related to watershed restoration and collecting rocks or felling of trees will avoid heritage sites. These sites will be flagged prior to implementation. The entire area of potential effect was surveyed for heritage resources in 2010. Standard Resource Protection Measures for heritage resources will be implemented when activities are located immediately adjacent to cultural resources (Sierra PA, 2001 Amendment, Attachment B). Surveyed areas that are devoid of heritage resources may be used to collect rocks and trees for the restoration work.

Item 9: *Discuss the potential for the Project to cause indirect significant impacts, either by causing user groups to go elsewhere, causing significant impacts off-site, or significantly increasing use in the vicinity of the Project site.*

The Groundhog Meadow Watershed Restoration project should not affect any use levels in the project area. It simply restores stream channels to prevent future erosion and allow for meadow restoration.

Item 10: *Discuss the potential for the project to affect climate change*

This project would have very little effect on climate change. The project is to be completed using all hand work, as it is in the wilderness, and mechanical equipment is not allowed. Therefore, the only greenhouse gas emissions would be from driving to the trailhead to the project site.

The project has potential for a very slight increase in carbon sequestration. Wetlands are carbon sinks, storing carbon in the form of live vegetation, dead vegetation, peat, and other decomposing organic material. This project should, over time, allow for a greater portion of the meadow to become wet, and therefore increase the area of wetland. While this project itself would likely have only a negligible impact, this project combined with all other projects in the Kern Plateau over the past 20 years, as well as the future expected projects, should allow for this area to sequester more carbon than it has over the past century.

Description of Methods and area disturbed

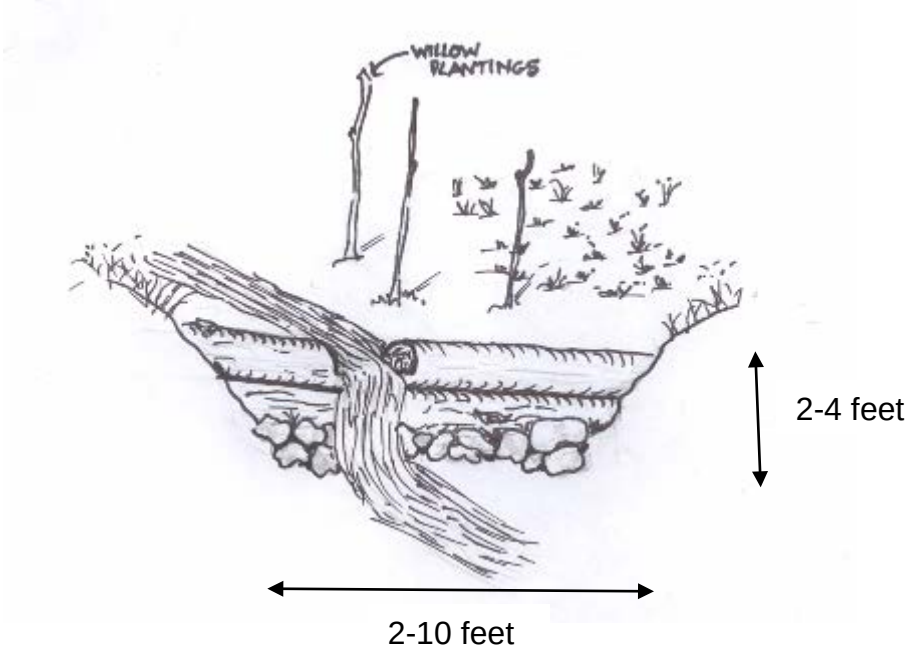
All work would be completed using hand labor. No mechanized equipment would be used in the project. The project would consist of placing natural items such as rock, logs, cut branches, and locally derived sod on streambanks and in stream beds to help reduce erosion and allow channels to aggrade more toward their potential.

About 450 square feet (0.01 acres) of land disturbance would occur.

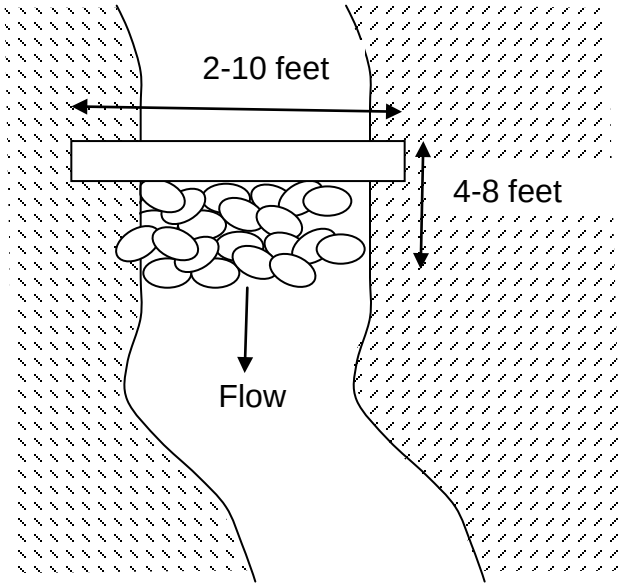
The drawings below show the type of work that will be completed, as do photos #7 and 8 in section 6e of this grant application.

Plan view and cross-section drawings

Log Grade Control Structures (Up to 17 of these structures would be built)
Cross-section

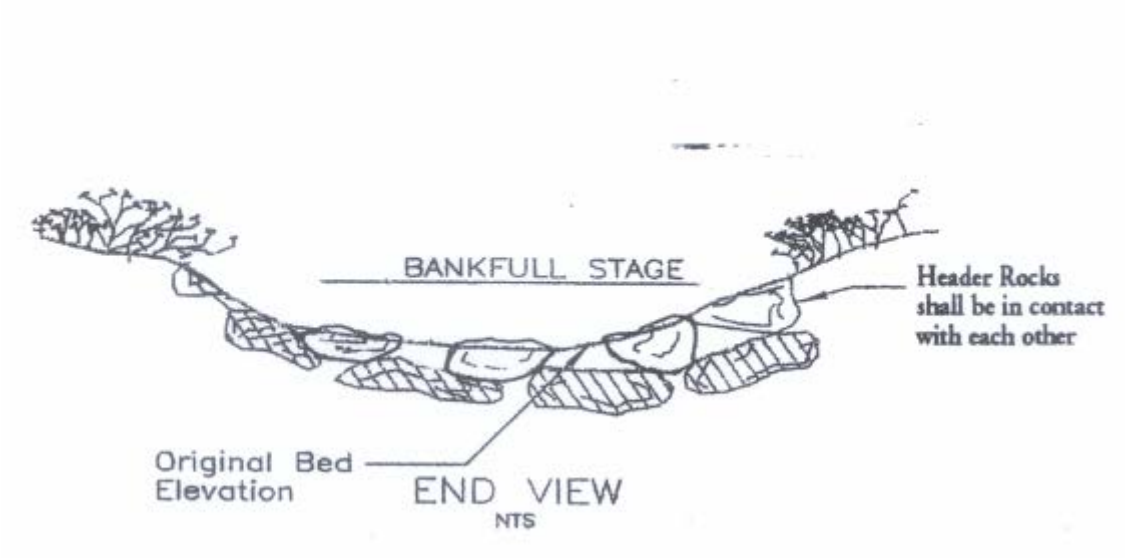


Plan View

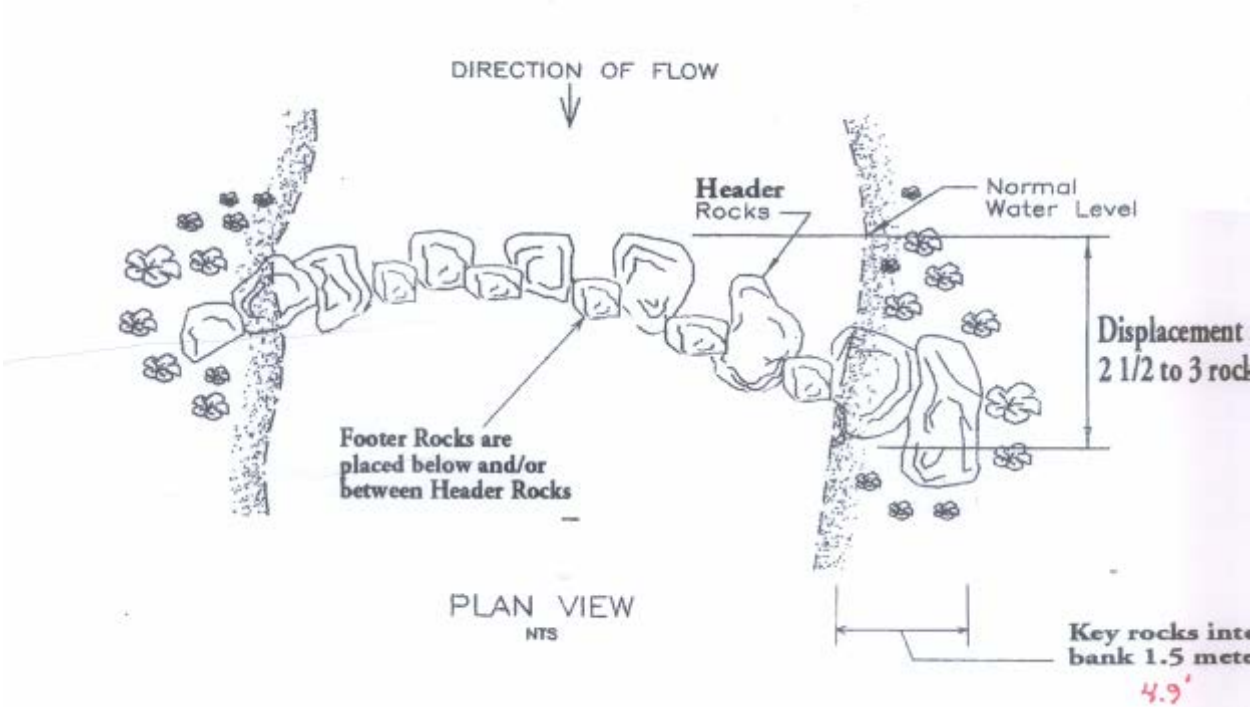


Rock Grade Control Structure

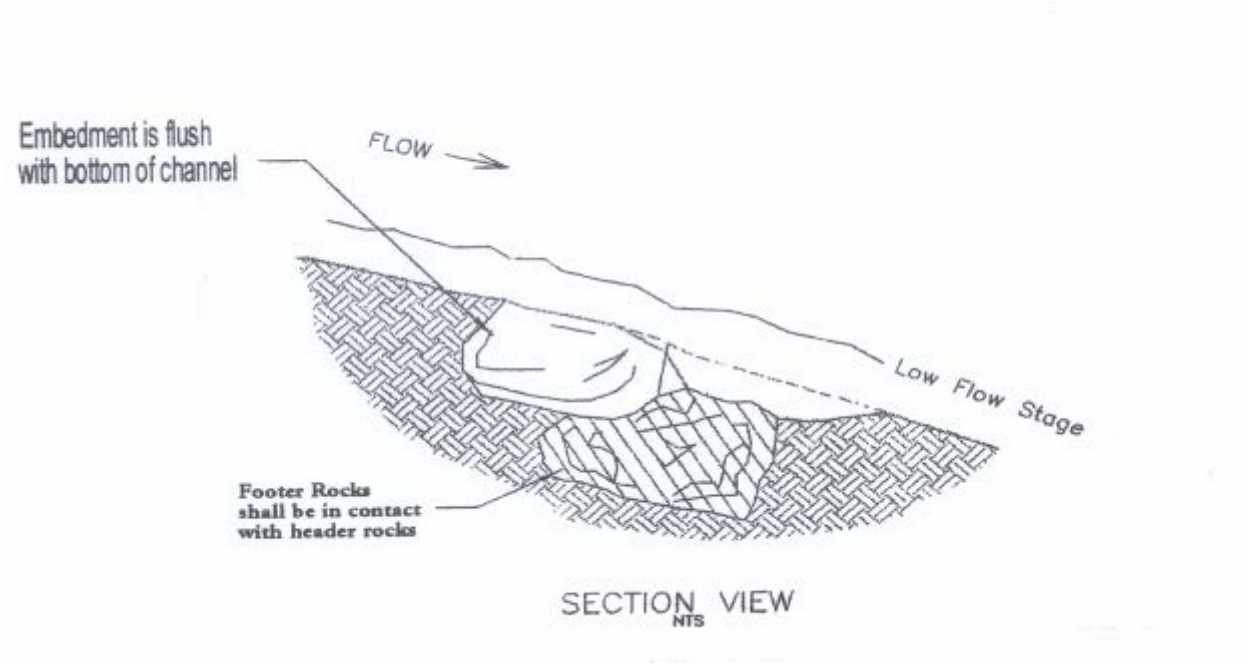
Cross-section view



Plan View



Longitudinal Section View



Decision Memo

Kern Plateau Stream and Riparian Restoration

USDA Forest Service
Inyo National Forest
Mount Whitney Ranger District
Inyo and Tulare Counties, California

Background

The project sites are located on the Kern Plateau within the Golden Trout Wilderness on streams within meadows where there has been active headcutting, incision, and/or widening that currently threatens to extend upstream. Historic livestock grazing, and other recreational uses have likely contributed to altered stream conditions. In most cases, this stream alteration has also affected the hydrologic function of the surrounding meadow by lowering the water table. There is a need to improve the hydrological condition of the stream to maintain and improve meadow conditions (ie. maintain and increase water tables) for wildlife habitat and livestock grazing. In addition, there is a need to prevent increased sedimentation into streams and alterations to stream morphology that could negatively affect habitat for Golden Trout and other aquatic species. The purpose of this project is to construct grade control and stabilization structures and repair existing structures, which have been installed during the past 50 years to help stop headcut expansion and to begin returning streams to more natural morphology. Without stabilization structures, the headcuts at the project sites would likely progress upstream, and contribute towards the loss of riparian and wet meadow habitat, and an increase in sedimentation and alterations to stream morphology, which would likely result in degradation of habitat for numerous terrestrial and aquatic species, including the Golden Trout.

Decision

I have decided to implement a restoration project to repair stream headcutting, incision, and/or widening by repairing existing headcut structures, and/or placing new grade stabilizing and headcut structures within Horseshoe Meadow (section 22, T.17S., R.35E.), Dutch Meadow (section 25, T.17S., R.35E.), Bullfrog Meadow (section 31, T.17S., R.35E.), Groundhog Meadow (section 16, T.18S., R.34E.), Ash Meadow (sections 1 and 2, T.18S., R.35E.), Casa Vieja Meadow (section 11, T.20S., R.34E.), and Olivas Meadow (section 2, T.20S., R.35E.). See attached location map and site plans for each meadow in Appendix A.

Approximately 40 new structures would be constructed and up to 125 existing headcut and grade stabilization structures would be repaired. Most materials used would be native materials, with some use of non-native materials such as biodegradable filter cloth and rebar. The structures would be placed across the channel over about 4.2 stream miles, but each structure covers only 5-20 feet of stream (from 50 to 400 square feet total ground disturbance each), for total ground disturbance of less than ½ acre at all sites. There could be up to an additional ½ acre of ground disturbance at borrow sites for rocks and other construction material. The stream length that would be protected from current and future downcutting would be about 6.2 miles. It is estimated that about 180 acres of meadow will be restored or protected from dewatering and subsequent vegetation change.

The following describes project specific activities, including resource protection and/or enhancement measures:

- The project will be completed utilizing non-mechanized equipment and primitive hand tools (ie. cross-cut saws, shovels, pulaski's, etc.). To prevent the spread of noxious weeds, the tools will be cleaned before being transported to the project site.

- For most of the project sites, trees will need to be utilized for constructing headcut and grade stabilization structures. Trees up to 12 inches dbh would be cut with cross-cut saws and moved by hand to the project site. Trees would be selected randomly around the project sites so as to not impact the visual quality and wilderness character. Trees that are visible from trails or campsites would not be removed. Where feasible, standing dead and down logs may be used. Stumps from cut trees would be flush cut and disguised so as not to affect wilderness character.

- Discourage livestock access to treatment structures using temporary electric fences and tree branches around the treatment sites. It is expected that electric fences may be needed to surround the Casa Vieja and Horseshoe project sites, and that the remaining sites could be protected with tree branches.

- The project would be completed during low water periods and when the chance of runoff producing rain is less likely to protect water quality (minimize erosion and sedimentation). Project activities would be completed with the minimal amount of vegetation and ground disturbance as possible. The project would include planting sod plugs and willow stems to encourage more rapid establishment of vegetation to improve soil stability and minimize erosion. The following Best Management Practices (BMP) would be implemented: BMP 2-3, BMP 2-13, and BMP 2-24.

- The project area, including rock collection and tree removal areas would be surveyed for sensitive plant species prior to implementation of project activities. If sensitive plant species are found, they would be identified and disturbance to the plant populations would be minimized or avoided if feasible. Foot traffic across the sand flats and immediately adjacent areas would be minimized to protect potential sensitive plant habitat.

- If mountain yellow-legged frogs or Kern Plateau slender salamanders are identified in the immediate vicinity where the structures will be placed, frogs and salamanders would be trans-located to a suitable area near the worksite.

- Protection of heritage resources is incorporated into the decision, and will follow the stipulations in the October, 1996, Programmatic Agreement (PA) among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Regarding the Identification, Evaluation, and Treatment of Historic Properties Managed by the National Forests of the Sierra Nevada, California.

- Ground disturbing activities related to this project, including the collection of rocks and felling of trees will avoid heritage sites. These sites will be identified prior to

implementation. Un-surveyed areas within the APE that may be subject to ground disturbance will be surveyed for heritage resources prior to implementation of the project. Standard Resource Protection Measures for heritage resources will be implemented when activities are located immediately adjacent to cultural resources (Sierra PA, 2001 Amendment, Attachment B).

This action has been categorically excluded from documentation under the Environmental Policy and Procedures Handbook, FSH 1909.15, Section 31.2, category 6, "*Timber stand and/or wildlife habitat improvement activities which do not include the use of herbicides or do not require more than one mile of low standard road construction (Service level D, FSH 7709.56)";* and category 7, *"Modification or maintenance of stream or lake aquatic habitat improvement structures using native materials or normal practices"*. It has been determined that there are no identified extraordinary circumstances or conditions associated with this project that would have a significant effect on the environment (FSH 1909.15, section 30.3). The following describes the contributing information that led to this conclusion:

a. *Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species.*

   Botany
   Summarized from the Biological Assessment/Evaluation for Plant Species (dated February 19, 2008) - There are no known federally threatened or endangered plant species or designated critical habitat within or adjacent to the project area. There are six Forest Service sensitive plant species that have potential habitat within the project area. Based on the existing information on known occurrences, the ability of the species to tolerate occasional disturbance, and the relatively small proportion of the populations that could be affected, it was determined that the project may affect individuals, but will not lead to a trend toward federal listing. The three moonwart spp. may actually benefit in the long-term, since the project is designed to improve the condition of meadow habitat.

   Terrestrial and Aquatic Wildlife Species
   Summarized from the Biological Assessment/Evaluation for Terrestrial Wildlife Species (dated April 7, 2008) and Aquatic Wildlife Species (dated April 3, 2008) – There are no known federally threatened or endangered wildlife species or designated critical habitat within or adjacent to the project area. It was also determined that there would be no affect to any Forest Service sensitive terrestrial wildlife species, and there may be short-term effects to the Forest Service sensitive aquatic species. However, the project would likely provide long-term benefits to the terrestrial and aquatic sensitive species that have suitable habitat within the project area.

b. *Flood plains, wetlands, or municipal watersheds*. The project will not occur within floodplains, wetlands, or municipal watersheds. The project would restore hydrological conditions, thereby enhancing riparian and meadow habitats.

c. *Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas*. The project would occur within the Golden Trout Wilderness

Area. Project activities would restore natural hydrological processes and would improve wilderness character over the long-term. The potential short-term effects to wilderness character (including natural qualities and visitors' solitude) would be minimized by completing the work with non-mechanized tools and equipment, minimizing the amount of vegetation and ground disturbance with careful consideration of the selection of trees to be removed, and utilizing native materials for the stream stabilization structures and native plants for revegetation efforts.

d. *Inventoried roadless areas*. The project will not occur within inventoried roadless areas.

e. *Research natural areas*. The project will not occur within research natural areas (RNA).

f. *American Indians and Alaska Native religious or cultural sites*. There are no American Indians and Alaska Native religious or cultural sites within the project area.

g. *Archaeological sites, or historic properties or areas*. It was determined that there would be no adverse effect to archaeological sites or historic properties. Protection of heritage resources is incorporated into the decision, and will follow the stipulations in the October, 1996, Programmatic Agreement (PA) among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Regarding the Identification, Evaluation, and Treatment of Historic Properties Managed by the National Forests of the Sierra Nevada, California.

In addition, the project has limited context and intensity (40 CFR 1508.27), and this action will produce little or no individual or cumulative environmental effects, to either biological or physical components of the human environment (40 CFR 1508.14).

Public Involvement

The Kern Plateau Stream and Riparian Restoration Project has been listed in the Inyo National Forest Schedule of Proposed Actions (SOPA) since April, 2008. The SOPA is mailed to individuals, organizations, and agencies that have asked to be notified of proposed actions on the Inyo National Forest. The SOPA is also posted on the Inyo National Forest website. On March 13, 2008, a letter initiating scoping and requesting comments on the proposed action was mailed to 14 individuals and organizations. No comments were received.

Findings Required by Other Laws

This action is found to be consistent with all applicable laws and the Inyo National Forest Land and Resource Management Plan (1988), as required by the National Forest Management Act.

Implementation Date

This decision may be implemented immediately.

Administrative Review or Appeal Opportunities

This decision is not subject to legal notice and comment procedures of 36 CFR 215.4, and is not subject to administrative appeal pursuant to 36 CFR 215.12.

Contact Person

Further information regarding this decision can be obtained from Todd Ellsworth, Watershed Program Manager, Inyo National Forest, 351 Pacu Lane, Suite 200, Bishop, CA 93514; Phone 760-873-2457.

/s/ Margaret Wood — 4/9/08

Margaret Wood
Deputy District Ranger

Date

Long Term Management Plan

Groundhog Meadow Watershed Restoration Project

The Inyo National Forest (INF) has long-term goals for Groundhog Meadow, as well as the entire Kern Plateau area, the geographic area that encompasses Groundhog Meadow. To meet those goals, the INF has developed a long-term management plan for the meadow. The plan includes protecting the meadow itself from further degradation and improving its overall condition, as well as protecting the work from this project itself, as well as similar recent projects.

The long-term management plan entails monitoring the site annually for the first two years after project implementation, and then every four years after that. If monitoring finds that Groundhog Meadow is degrading further and is in need of additional restoration work to prevent irreversible effects, then a new project will be planned and implemented as soon as possible after the problem is identified. In Groundhog Meadow, of particular concern would be development of new headcuts, further channel incision or widening, streambank vegetation loss, or stream straightening.

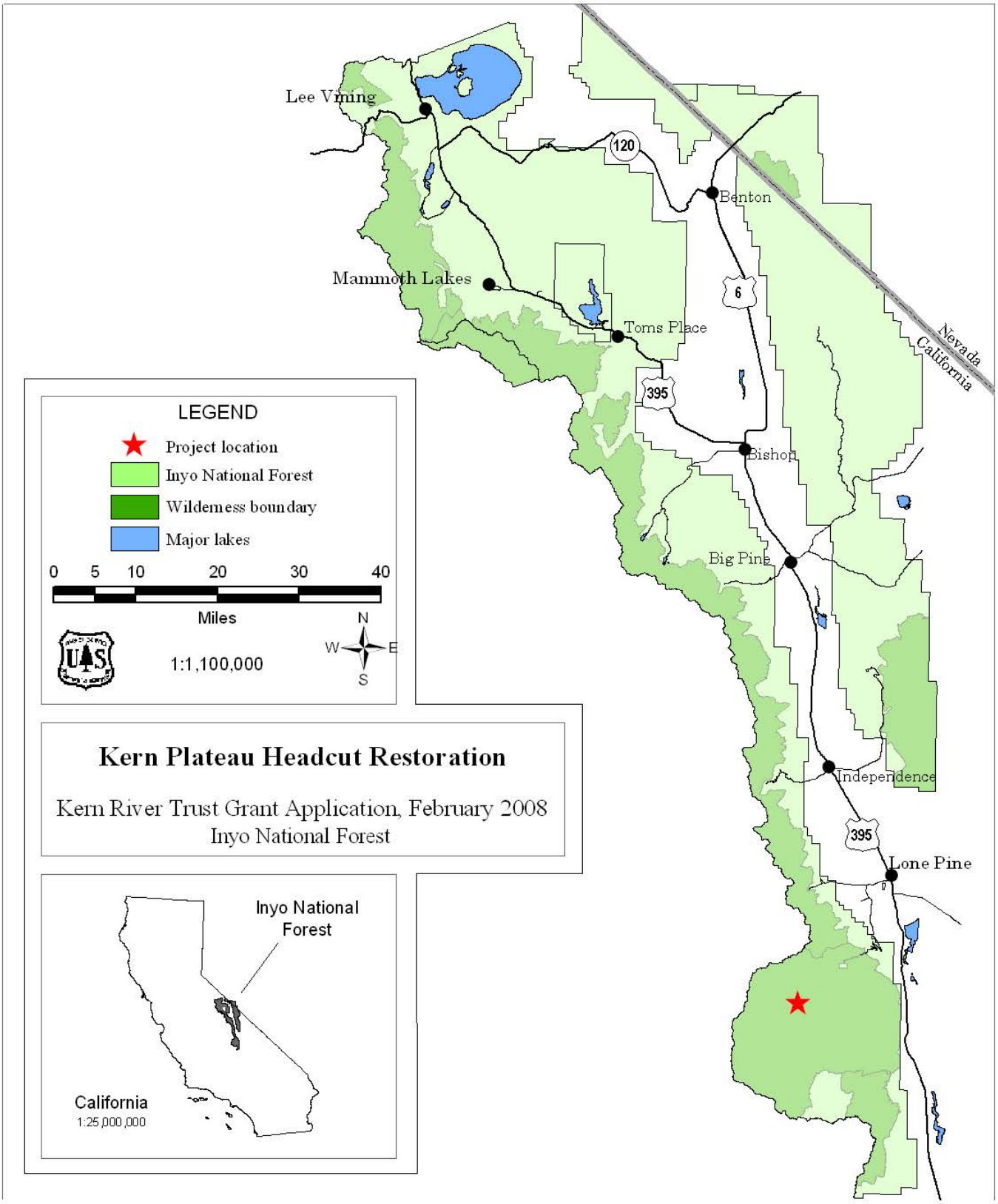
If monitoring finds that a structure or other portion of this project is not performing as designed, the structure will be repaired within one year of problem identification, or preferably sooner. However, if monitoring occurs late in the season, it may not be possible for a crew to come to repair a site in the same season. If the damage is slight, then it will be repaired immediately.

Monitoring will consist of an INF staff member visiting the site. The staff member will bring previous photographs, as well as maps showing locations of all previous restoration work. The person will visit each restoration site to determine how well the restoration is working. The person will also walk all stream channels within the meadow, looking for new incision, headcutting, widening or straightening. Any problems will be documented in writing, with photographs, and coordinates will be recorded on a GPS unit.

The proposed timeline for monitoring and long-term management is shown below:

Timeline	**Action**
Summer 2013	Implement first year of restoration actions
Summer 2014	Implement second year of restoration actions. Monitor success of first year actions. Repair any sites found to have performance deficiencies.
Summer 2015	Monitor success of first and second year actions. Repair any sites found to have performance deficiencies.
Summer 2016	Monitor success of first and second year actions, as well as overall meadow conditions. Repair any sites found to have performance deficiencies. If any new meadow degradation is found, plan for restoration work in Summer 2017.
Summer 2017	Implement any new necessary restoration work. If no work necessary, do not visit the site in 2017.
Summer 2021	Monitor success of this project's actions as well as overall meadow conditions. Take action as necessary, planning for work in next summer.
Summer 2025	Monitor success of this project's actions as well as overall meadow conditions. Take action as necessary, planning for work in next summer.
Summer 2029	Monitor success of this project's actions as well as overall meadow conditions. Take action as necessary, planning for work in next summer.

This area is currently being considered for re-opening to grazing, with the NEPA process just beginning. If grazing is allowed in this area, it will be monitored regularly as part of grazing permit administration. Therefore, there will not have to be an extra trip for monitoring meadow condition as related to this project. If the site does not receive grazing, the INF would still visit the site every 4 years until 2029 to ensure that structures constructed under this project are still performing as intended.

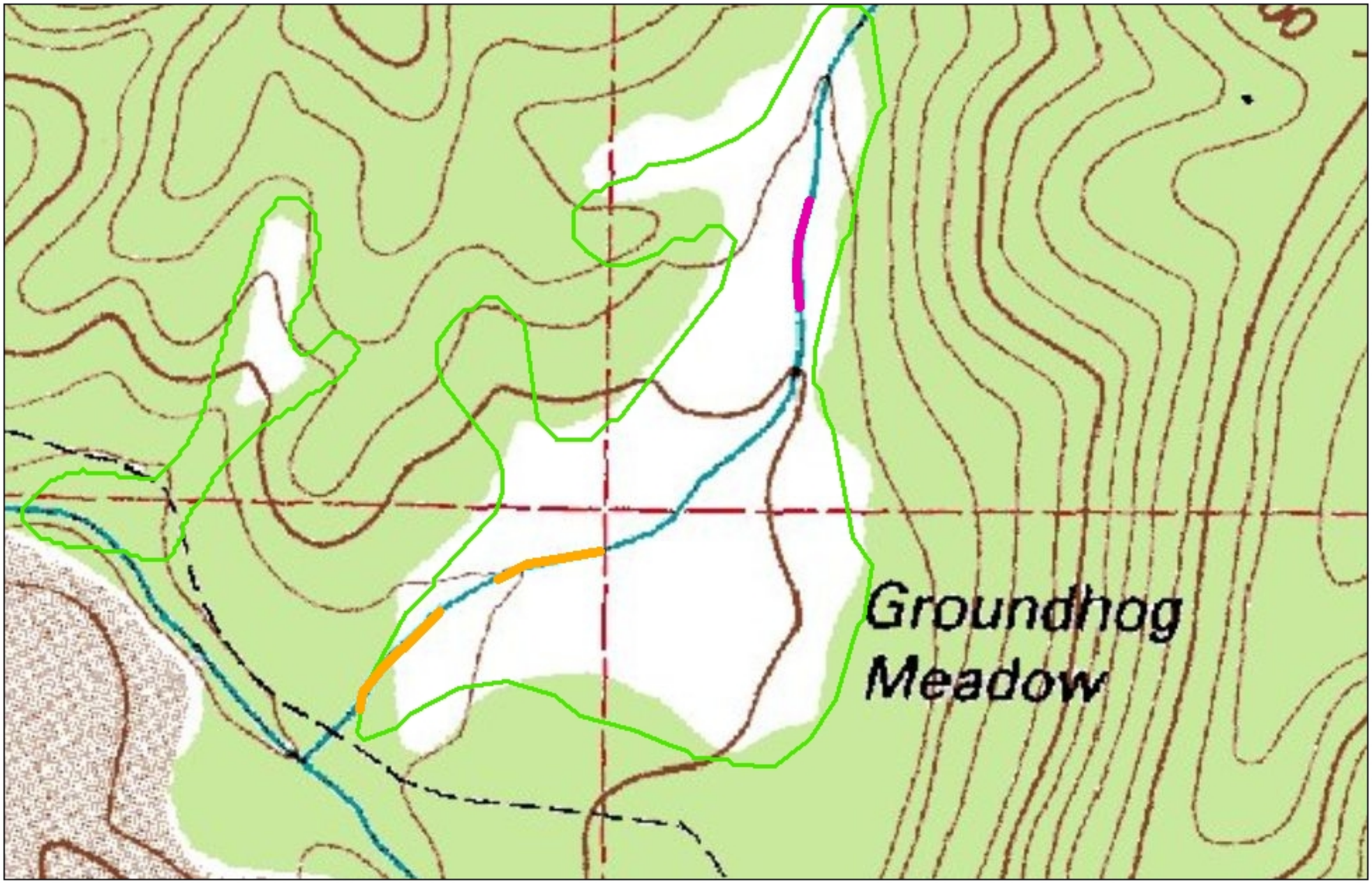

Lee Vining
120
Benton
Mammoth Lakes
6
Toms Place
Nevada
California
395
Bishop
Big Pine
Independence
395
Lone Pine
LEGEND
Project location
Inyo National Forest
Wilderness boundary
Major lakes
0 5 10 20 30 40
Miles
1:1,100,000
N
W
E
S
Kern Plateau Headcut Restoration
Kern River Trust Grant Application, February 2008
Inyo National Forest
Inyo National Forest
California
1:25,000,000

Kern Plateau Headcut Restoration and Riparian Fencing

Site Map

PARCEL MAP

Parcel map is not considered critical information for purposes of this project, as the project is on federal lands in a wilderness area.



Groudhog Meadow Watershed Restoration Project Extent

0 250 500 1,000 Feet

N W E S

Meadow boundary
Larger structure segment
Smaller structure segment

e.3. Photos of the Project Site

Groundhog Meadow Watershed Restoration Project – Inyo National Forest

Photo 1. Photo showing the environmental setting of Groundhog Meadow. The brown vegetation shows areas where the water table has lowered and the meadow has dried.

Photo 2. Large gully in the upper portion of the meadow. The photo shows that the channel bottom has started to aggrade and vegetate. This project would add structures to speed up the filling in (aggradation) process that has stalled at its current condition.

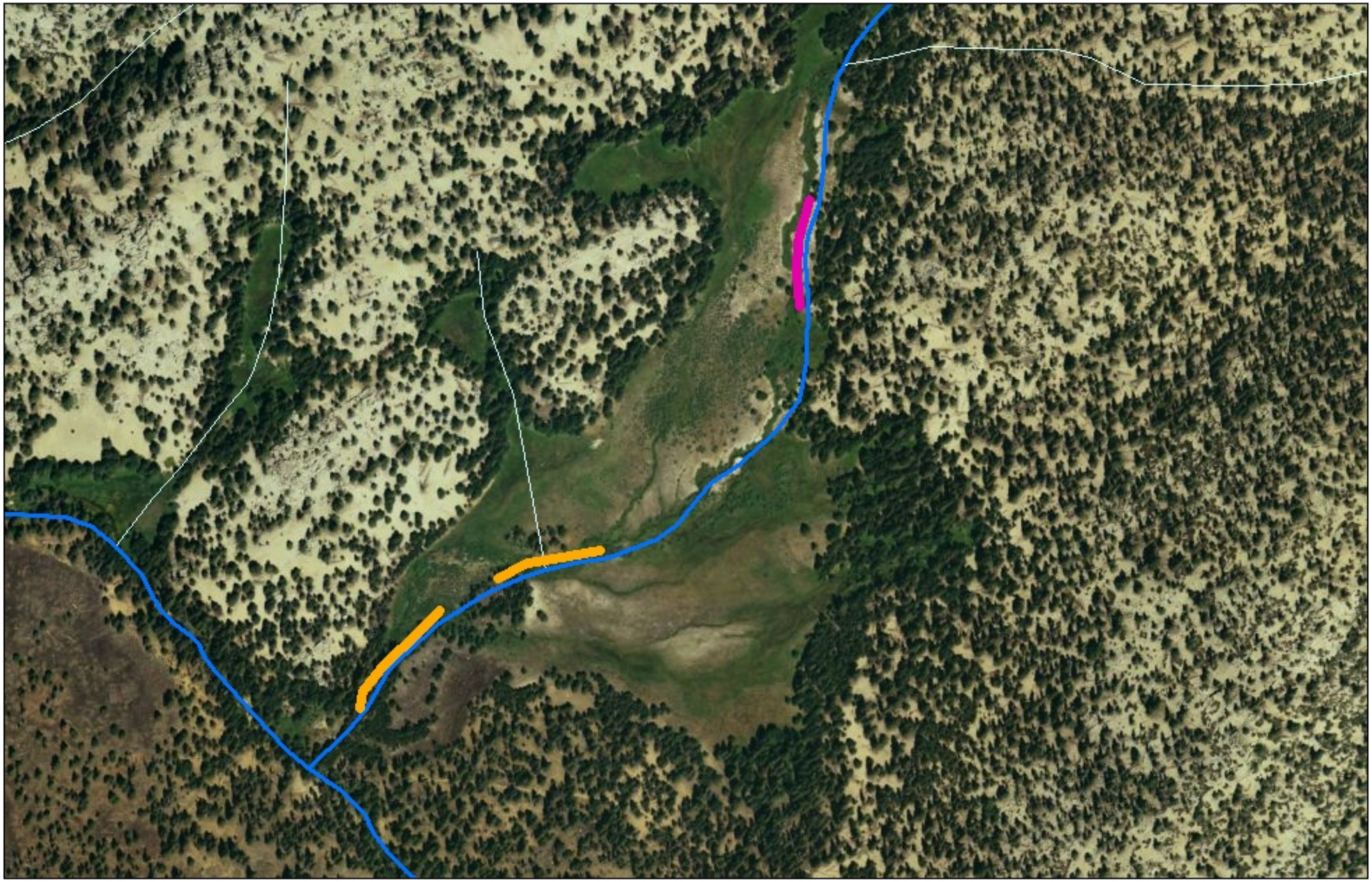
Photos 3 and 4. Small, unstable stream channel in the lower portion of the meadow. These banks remain unstable and unvegetated, likely due to loss of organic matter from past soil disturbing practices. This project would attempt to create a more meandering channel through placing structures in the creek and along banks, and would also revegetate these banks.

Photo 5. Old grade control structure that was too high. In this project, only small, closely placed structures would be built, so that there are fewer large drops such as this one. This project would place low grade control structures below this one to make many smaller drops, rather than this one large drop.

Photo 6. Grade control structures were previously placed in this stream segment in Groundhog Meadow, which was previously incised and very straight. This is similar to the end result that we expect for this project.

Photo 7. Example of a grade control structure placed in the upper gully in 2011. Structures similar to this would be constructed in the upper gully in the proposed project.

Photo 8. Example of a grade control structure placed in the stream at the site of an old headcut. A similar structures would be placed at one location in the proposed project. Sod plugs were placed between and adjacent to the rocks, and by the next spring, many of the rocks were covered by growing sod.



Groudhog Meadow Watershed Restoration Project Extent

Feet
0 250 500 1,000

N
W E
S

Meadow boundary
Larger structure segment
Smaller structure segment